

REMARKS

This application has been reviewed in light of the Office Action dated August 12, 2005, made final by the Examiner. Claims 1-24 are pending in the application. By the present amendment, claims 1 and 15 have been amended for clarification. No new matter has been added, and no new issues that would require a new search are raised by the amendments. The Examiner's reconsideration of the rejection in view of the amendment and the following remarks is respectfully requested.

By the Office Action, claims 1 and 15 stand rejected under 35 U.S.C. § 112 first paragraph, as failing to comply with the written description requirement.

The Applicant respectfully disagrees and requests reconsideration of the rejection.

Claim 1, as previously amended recites, *inter alia*, a cache coupled to the server for storing digital documents sent by the server when ordered by a given number of customers above a threshold amount, the cache for reducing network traffic by satisfying the on-demand orders instead of the server. When a given number of orders are placed the content is cached. This may include a single order if the threshold is zero.

The Examiner's attention is drawn to page 3, lines 8-9, which states, "A cache is coupled to the server for storing digital documents sent by the server when ordered by a customer". This provides support for caching content for at least one order.

Further, there is additional support in the specification. At page 6, lines 28-32, it states that, "DSLAM 9 preferably includes a storage mechanism or cache 20 for the purposes of storing more frequently used multimedia/video content and also for serving multimedia/video

content to the end-customer across a DSL link". Frequency of use is based on customer orders as clearly a document must be ordered in order for the document to be used. The more frequently a document is ordered indicates that the document is more frequently used. The number of orders needs to be compared to some criteria to assess its frequency of use. The Applicant being his own lexicographer has used "a threshold" to indicate this criteria.

A threshold is referred to in several places in the specification, for example, at page 7, line 32 to page 8, line 4, which states, in relevant part, "Content (e.g., a movie) will be removed from the DSLAM storage 20, for example, when the demand for a movie reaches a certain low threshold. This threshold may be set automatically or configured as a system parameter". For example, this threshold may be set to zero, so that a single order of the content will store the content.

In one embodiment, the storage device 20 stores (maintains) the content in accordance with the number of orders placed, e.g., at page 10, lines 6-13, which states, "The amount of time a video remains in cache 20 may also be determined in block 218. This calculation or determination may be made based on the number of orders for a given video. A formula or other criteria may be employed to determine the amount of time a video remains in cache. For example, if no orders for a given video have been placed in a 24-hour period, that video is removed from cache if a video is available to replace it. Other criteria and procedures are also contemplated. NCS 11 maintains the storage on cache 20. This includes storing and deleting content therein".

That a number of orders reaching a threshold (frequency of orders) permits storing (maintaining) content is believed to be fully supported by the specification. One skilled in the art would easily understand that the present invention as claimed is fully supported by the specification. Therefore, the rejections of claim 1 and 15 are believed to overcome for at least the reasons stated. However, in an attempt to further clarify the present claims, claims 1 and 15 have been amended to recite, *inter alia*, a cache coupled to the server for storing and maintaining digital documents sent by the server when ordered by a given number of customers above a threshold amount. While it is submitted that storing and maintaining means the same thing in memory storage systems, “and maintaining” has been added to the claims to eliminate any confusion. Reconsideration of the rejection is earnestly solicited. In addition, since the previous amendment was not considered by the Examiner, the Applicant respectfully requests that the Examiner withdraw the final rejection to more fully consider the present claims.

By the Office Action, claims 1, 2, 4, 5, 9-16 and 19-24 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,647,411 to Towell et al. (hereinafter Towell).

As stated previously, Towell is directed to a video-on demand system, where a placed order results in a plurality of titles being speculatively downloaded to a cache and offered to the subscriber for future viewing. The cache system proposed by Towell provides suggestive advertising by offering the opportunity to view programs of a similar nature to the user’s original order. The number of orders is of no concern in Towell, and the bandwidth and storage space

seem to be of limited concern, since a single order carries with it a plurality of speculative titles that are cached as a result.

In addition, the system of Towell permits the cache to be located anywhere in the system, thereby indicating that the system of Towell is not concerned with reducing order lag time by caching documents close to the user's locations, which will be potentially ordering the document.

In stark contrast, the present invention provides caching of documents based on a number of actual orders received for that document. The more a document is requested the more likely it will be stored in cache and/or the more likely it will remain in cache. Frequently ordered movies will be stored in and/or remain longer in a more localized cache to reduce lag time in receiving the order. This is completely different from the system of Towell which caches different content in the hope of enticing a subscriber to order the speculatively cached content.

Claim 1 now recites, *inter alia*, an asynchronous transfer mode (ATM) on-demand digital document delivery system, comprising ... a cache coupled to the server for storing and maintaining digital documents sent by the server when ordered by a given number of customers above a threshold amount, the cache for reducing network traffic by satisfying the on-demand orders instead of the server.

Claim 15 now recites, *inter alia*, a method for providing a digital document on-demand over an asynchronous transfer mode (ATM) network including ... storing and maintaining the digital document in a cache located within the ATM network when a given number of orders for the digital document exceeds a threshold.

The system of Towell is for suggestive advertising of new related titles and is not concerned with “reducing network traffic by satisfying the on-demand orders instead of the server”. This is apparent from the fact that Towell downloads different content to the cache and further is not concerned where the cache is located (the cache can be located on the server in Towell). In addition, nowhere in Towell is a cache coupled to the server for storing and maintaining digital documents sent by the server when ordered by a given number of customers above a threshold amount.

Towell sends unwanted and unsolicited content to users in a way that is directly in contradiction with the teachings of the present invention. For example, Towell teaches sending additional titles and content to the user based upon user viewing habits. This ties-up bandwidth and storage space and is not desirable and is inconsistent with the teachings of the present invention. The present invention is directed to a system and method that increases bandwidth and reduces storage space by reducing the amount of cached content. In addition, the storage in accordance with the present invention is preferably done locally to further reduce lag and usage of bandwidth. Since Towell teaches away from the present claims, Towell is wholly deficient and fails to not only teach the present claims, but fails to provide sufficient motivation to be combined with other references in an attempt to teach the present invention.

It is therefore respectfully submitted that Towell fails to disclose or suggest the present claimed invention as set forth in amended claims 1 and 15. Claims 1 and 15 are believed to be in condition for allowance for at least the reasons stated. Dependent claims 2-14 and 16-24 are also believed to be in condition for allowance for at least the reasons stated and due to their

dependencies from claims 1 and 15.

By the Office Action, claims 3 and 8 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Towell in view of U.S. Patent No. 6,640,239 to Gidwani, hereinafter Gidwani.

The Applicant disagrees with the rejection in view of the above stated reasons. Reconsideration is respectfully requested.

By the Office Action, claims 6, 7, 10, 17, 18 and 24 stand rejected under 35 U.S.C. §103(a) as being unpatentable over Towell in view of Gidwani and further in view of U.S. Patent Publication No. 2002/0007402 to Thomas Huston et al., hereinafter Huston.

The Applicant disagrees with the rejection in view of the above stated reasons. In addition, other reasons exist for allowing these claims. For example, claims 7 and 17 include: wherein the amount of time the given document is maintained in the cache is based on a number of orders placed for the given document.

Towell, Gidwani and Huston, alone or in combination fail to disclose or suggest at least this element. Huston at paragraph 57 discusses deleting cache content after no orders for the content have been placed for a specified amount of time. The amount of time is pre-specified and is not dependent on a number of orders placed. This method is supported by the other paragraphs of Huston cited by the Examiner. However, the elements of the present invention are not disclosed or suggested.

As discussed previously, Claim 7 dynamically creates a time based on the number of orders and not by pre-specifying a time to delete content if no orders are received.

Dynamically means that based on a number of orders the amount of time is proportionally increased. (See e.g., specification at page 7, lines 16-24).

The system of Huston is triggered when a SPECIFIED time has passed and no additional orders have been received. If one order is received the clock is reset. If five orders are received the clock is reset by the last order. This is completely different from the present invention.

Claims 6 and 7 recite, *inter alia*, a network control system coupled to the server for determining an amount of time a given document is maintained in the cache, wherein the amount of time the given document is maintained in the cache is based on a number of orders placed for the given document.

The amount of time the given document remains in the cache is based on the number of orders placed. The system of Huston is not based on the number of orders, only the last order. The Examiner cleverly stated that if the number of orders is zero for the system of Huston, then the amount of time is based on the number of orders. This is not the case.

First, it does not make sense to discuss a cache system where the content cached is the result of an order. If there are no orders then there would be nothing in the cache to begin with, and the amount of time the given document is maintained in the cache is moot and pointless to consider. Second, the system of Huston is independent of the number of orders. Instead, Huston relies on a predetermined amount of time that elapses after a last order and is independent of the number of orders.

In the present invention, the number of orders can dictate a very long time if there is a large number (e.g., in one illustration, 10 orders placed and 5 minutes allotted to each means the content lasts for 50 (5x10) minutes in cache). In contrast, the system of Huston may have a large number of orders but after the fixed allotted time, the cached content would be deleted (e.g., if the specified amount of time is 5 minutes and the 10 orders are placed at the same time the content would be maintained for only 5 minutes).

It is therefore, respectfully submitted that Huston is completely different from the present invention and fails to cure the deficiencies of Towell and Gidwani. As such, the rejected claims and in particular, claims 7 and 17 are believed to be in condition for allowance.

Reconsideration is respectfully requested.

In view of the foregoing amendments and remarks, it is respectfully submitted that all the claims now pending in the application are in condition for allowance. Early and favorable reconsideration of the case is respectfully requested.

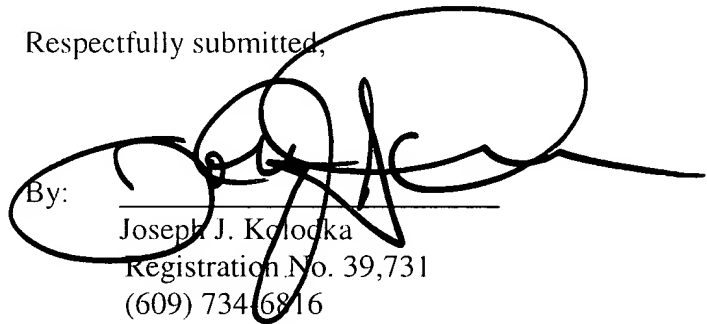
The Examiner is invited to call James Bitetto, Esq. (Reg. No. 40,513) at (516) 883-3868 to further discuss the issues in this case, and suggest possible claim amendments to further clarify the distinctions of the present invention over the cited art. An associate power of attorney form authorizing Mr. Bitetto to act on behalf of the undersigned was previously submitted on July 27, 2005.

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It is believed that no additional fees or charges are currently due. However, in the event that any additional fees or charges are required at this time in connection with the application, they may be charged to applicant's Deposit Account No. 07-0832.

Respectfully submitted,

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